

REMARKS

Claims 13-22 are pending in this application.

Claims 16, 18 and 21 are objected to.

Claims 13-15, 17, 19-20 and 22 are rejected.

The office action dated May 24, 2004 indicates that claims 16, 18, and 21 contain allowable subject matter. Although these claims were objected to for depending from rejected base claims, the office action indicates that these claims would be allowable if rewritten in independent form.

Claim 16 has been rewritten in independent form, and should now be allowable.

Claim 18 has been rewritten in independent form, and claims 14-15, 17, 19-20 and 22 have been amended to depend from claim 18. Claims 14-15, 17-20 and 22 should now be allowable.

Claim 21 has been rewritten in independent form and should now be allowable over Zhu.

The office action rejects claim 21 under the judicially created doctrine of obviousness-type double patenting, contending that claim 21 recites essentially the same invention as claim 5 of U.S. Patent No. 6,590,806. The double patenting rejection of claim 21 is respectfully traversed.

Claim 5 of the '806 patent recites a memory cell apparatus comprising a first and a second data layer comprising magnetic material; a first and a second nonconductive separation layer; and an antiferromagnetically coupled reference

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layer pair disposed between the first and second data layers. Each data layer is separated from the antiferromagnetically coupled reference layer pair by one of the separation layers. The first and second data layers have different coercivities

Claim 21 of the present application recites an information storage device comprising an array of memory cells; and a plurality of first and second traces for the array, the first and second traces extending in different directions. Each memory cell is at a cross point of a first trace and a second trace. At least some of the memory cells include series-connected first and second magnetic tunnel junctions. Sense layers of the first and second junctions have different coercivities, and the sense layers of the series-connected first and second junctions are made of different materials.

According to the office action dated December 18, 2002, the information storage device of claim 21 is not the same invention as a memory cell such as the memory cell apparatus of claim 5. The office action dated December 18, 2002 required restriction between claims 1-12 drawn to a magnetic memory cell and claims 13-22 drawn to an information storage device because the information storage device claims are patentably distinct from the memory cell claims (even though the memory cells of claim 13 contained the same features as the memory cells of claim 1). Because the office action held that information storage device of claim 21 is patentably distinct from the memory cell apparatus of claim 5, the office action has no basis to assert an "unjustified or improper timewise extension of the right to exclude." Therefore, the double patenting rejection of claim 21 should be withdrawn.

The examiner is respectfully requested to issue a notice of allowability. The examiner is invited to contact the undersigned to discuss any remaining issues.

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